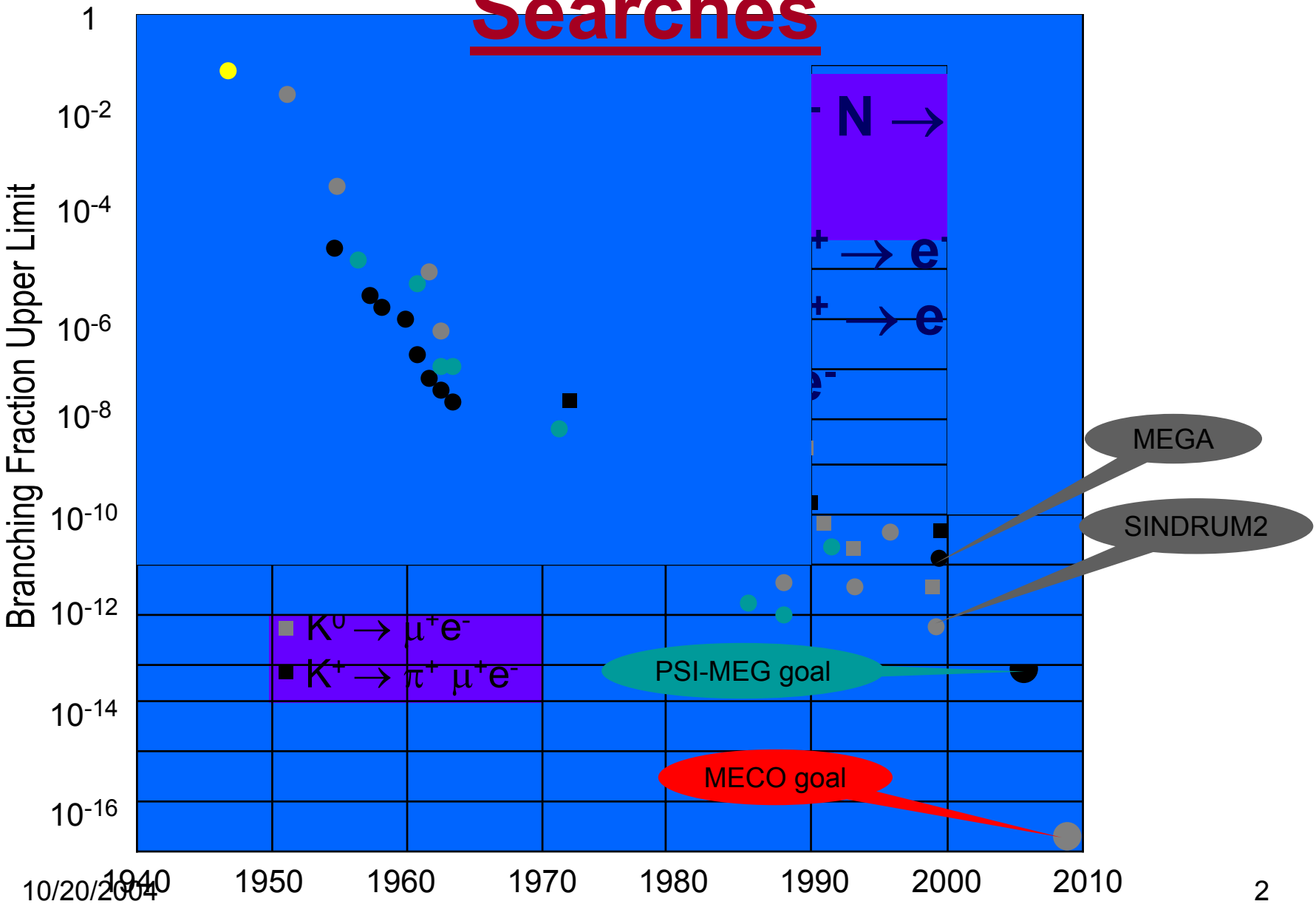
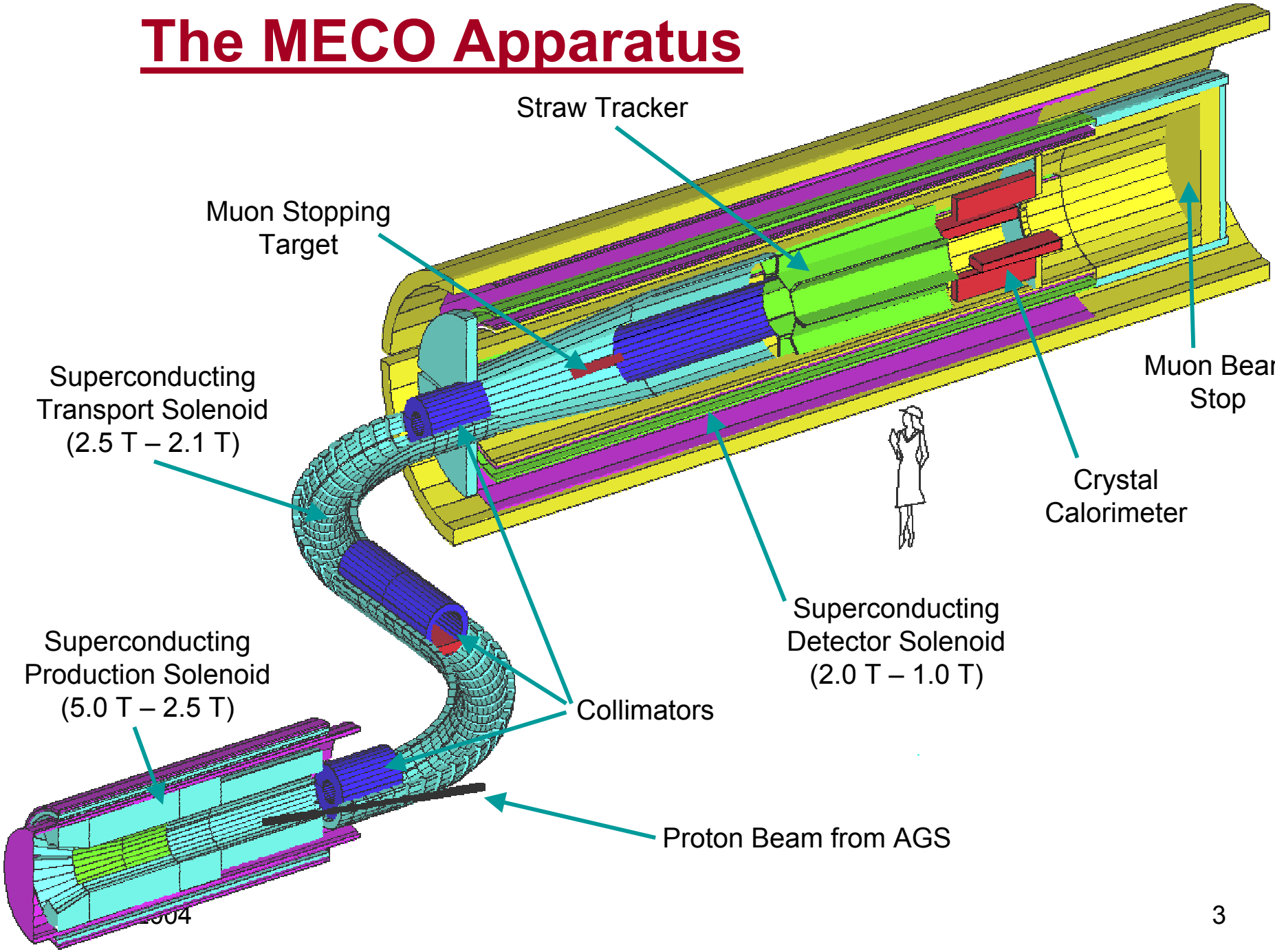
MECO Magnet Oversight Committee Meeting 9-12 October

Bill Willis

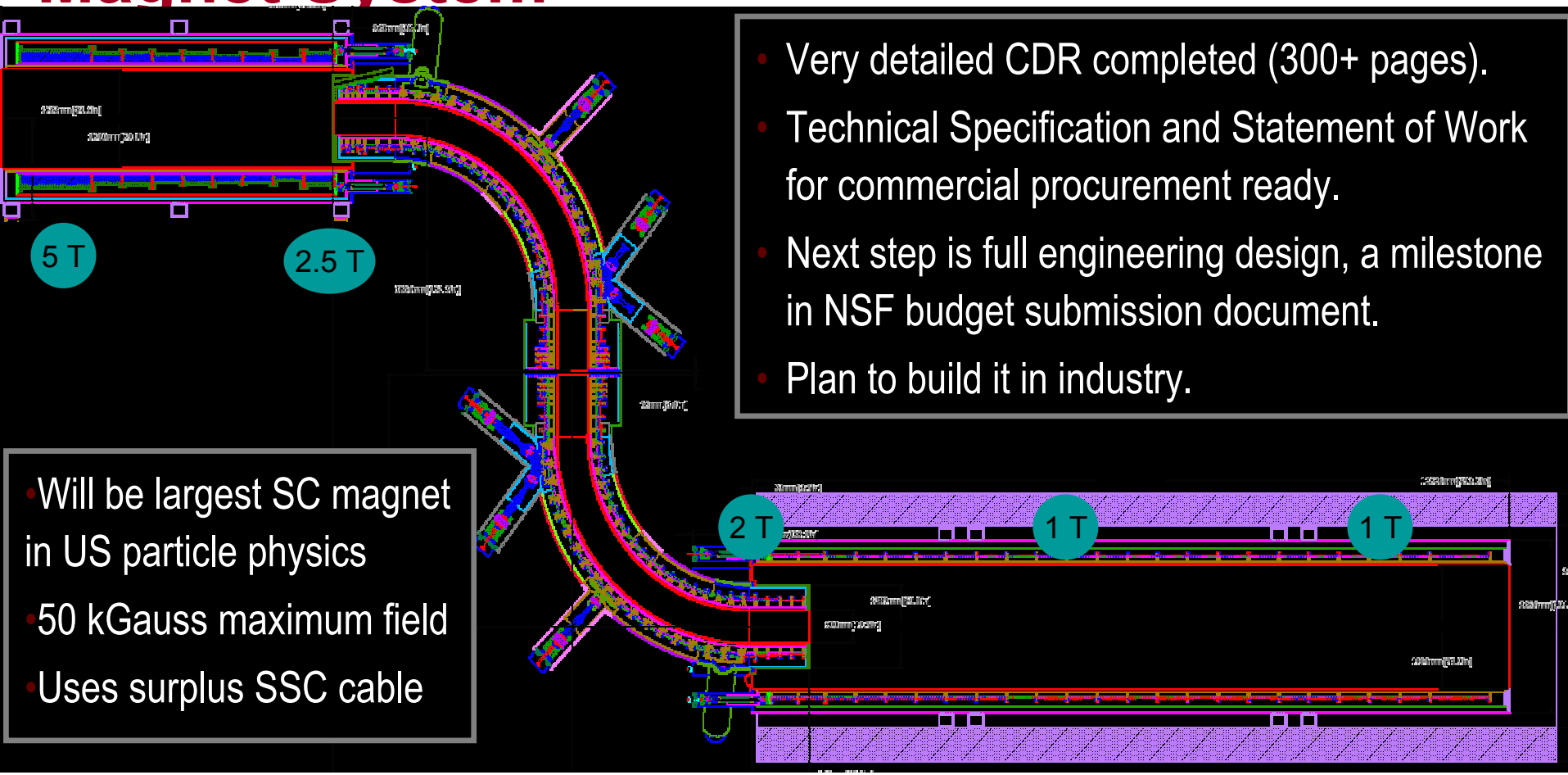
History of Lepton Flavor Violation Searches



The MECO Apparatus

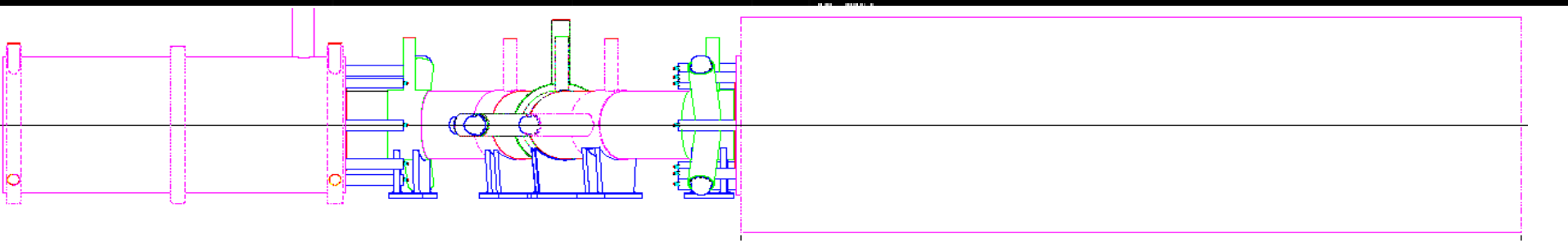


MIT - PSFC Conceptual Design of MECO Magnet System



- Very detailed CDR completed (300+ pages).
- Technical Specification and Statement of Work for commercial procurement ready.
- Next step is full engineering design, a milestone in NSF budget submission document.
- Plan to build it in industry.

- Will be largest SC magnet in US particle physics
- 50 kGauss maximum field
- Uses surplus SSC cable



Magnet Oversight Committee

- I decided that we need more than a review, a group that helps us actively, thus a MOC.
- Tom Taylor, CERN Chair
- Elwyn Baynham, RAL
- Gene Fisk, FNAL
- Herman ten Kate, CERN
- Akira Yamamoto, KEK
- A rare, powerful, group!
- Three days with the MECO and MIT groups

MOC Summary Key Points

- **Praise for the work of the MIT Magnet Group and the calculation and radiation work at UCI**
- **Many constructive suggestions, with priority on Risk Reduction, by *simplification,* which also reduces cost and delay**
- **Experience of all our magnet experts was that trying to get a vendor with large system responsibilities is expensive and (+30%?) and risky (pay in cost for risk, pay when trouble comes, and you may have to do more yourself): they say break it into pieces the vendors understand, and do the integration.**

Key points

- **Unanimous, strong opinion that cryogenics, controls, and perhaps installation, should be done by BNL. Control of BNL costs an issue.**
- **To follow this plan, the in-house groups need to be *strengthened*, especially MIT, and this needs to be done *quickly*, so that we can get a Baseline this year. There was a rough plan to get to a better cost estimate on that time scale.**
- **We believe Jon should reopen the discussions with BNL on their part: it would follow that he would establish links with MIT and UCI for coordination.**
- **Discussions planned with UCI next week.**